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COLLABORATIONS WITH STARTUPS

NUVVE: Supplies technology for the vehicle-to-grid (V2G) sector, which is based on the aggregation of electric vehicles into virtual power plants to provide ancillary services to the grid, turning potentially hundreds or even thousands of electric vehicles into virtual energy units, enabling them to offer reliable services to the grid while taking into account the electric vehicle's needs. Nuvve is part of a consortium with Enel and Nissan that is working to provide V2G services to customers: the service allows customers to sell the energy stored in their electric vehicle back to the grid, helping the TSO to balance the grid. The service is now operating in Denmark and is currently being tested in the UK.

Bigdely: The developer of disaggregation software that remotely identifies the consumption of individual home appliances, providing a consumption breakdown via a mobile app. The solution increases customer engagement, while also providing information that enables them to behave in a more energy efficient manner. Enel currently has an agreement in place to test Bigdely's solution in a pilot that will involve Enel's residential customers in South Africa, at the end of which, should the results of the test be positive, there will discussion of a commercial agreement.

Ultrasolar Technology: The Innovative quantum booster power optimisers developed by Ultrasolar enables the increase of power extracted from PV modules through high-frequency electric pulses generated by the pyroelectric effect that are applied to the solar cell in order to capture hot electrons and increase power production. The first phase of activities with Ultrasolar, the testing of the solution on residential scale modules, was successfully completed and now the technology is being tested on utility scale modules, at the successful completion of which a commercial agreement will be set up.

Archon Technology: The company, which is based in Italy with offices in the USA, develops drone hardware and software solutions. The Archon drone can autonomously reach its charging station when battery is running low before then returning to its activities once charged. Archon's software also enables the simultaneous in flight management of different drones, as well as analysis of the images captured by the drones' camera.

Nozomi Networks: Develops a cybersecurity software for industrial installations, which automatically builds an internal model of industrial networks and physical processes and uses behavioral analytics and continuous monitoring to detect changes to baseline states. The result is real-time insight into Industrial Control Systems networks, devices and process statuses, as well as rapid identification and remedying of cyber attacks and process anomalies. Enel has collaborated with Nozomi for a number of years and was the first corporation to test the company's solution. Enel also provided Nozomi with a reference during its fundraising period, resulting in 7.5 million dollars of investment from 2 US Venture Capital Funds. Currently Enel has an agreement in place to develop new Nozomi software features, which will also be made available commercially to third parties.



Demand Energy: Has developed a solution that maximises the economic returns of behind-the-meter storage systems, alone or in combination with distributed generation. The company provides a turnkey solution (hardware, software and services) that ties together modelling, design and simulation with installation and operational monitoring, control, and financial optimisation, to deploy storage-plus-DG systems at speed and scale. The software platform was designed as a scalable end-to-end solution that delivers differentiated value across the entire project life cycle, and is able to support utility-side, behind-the-meter and microgrid projects. Enel acquired 100% of the company this year.

TeleSense: Develops and delivers real-time environmental monitoring solutions for industrial applications that are designed to help manage the risks posed by today's changing environmental conditions. Its product wirelessly collects data, analyses it in the cloud and display it in ways that allow you to recognise critical issues and take immediate action. TeleSense uses industrial Internet of Things technology to monitor a range of critical parameters 24/7, all year round. Whether assets are at rest or in motion, TeleSense provides real-time alerts when monitored parameters are out of the user's customised range. This eliminates human error, improves operational efficiency, and reduces risks, costs, liabilities, and regulatory burdens. The collaboration has the aim of developing a portable sensor able to collect safety related data, such as environmental and biomedical parameters, gases, etc.

Sparkcognition: This company's solution, SparkPredict, enables truly predictive capabilities that can deliver significant cost savings and operational efficiency improvements to machine operators. SparkPredict learns from sensor data, identifies impending failures long before they occur and alerts operators to sub-optimal operation before it can cause any harm. The collaboration in place with Enel has the aim of reducing combustion instabilities in gas turbines, as well as cutting maintenance costs.